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EXAMINER

BRUCKART, BENJAMIN R

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,648

Applicant(s)

MIYAUCHI, NAOTO

Examiner

Benjamin R. Bruckart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Status of Claims:

Claims 1-20 are pending in this Office Action.

Claims 1-5, 8-10, 13, 15-16, 18-20 remain rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 2002/016967 by Mann et al.

Claims 6-7, 11-12, 14, 17 remain rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Publication No. 2002/016967 by Mann et al in view of U.S. Patent No. 6,279,001 by DeBettencourt et al.

Response to Arguments

Applicant's arguments filed in the amendment filed 4/6/2005 have been fully considered but they are not persuasive. The reasons are set forth below.

Applicant's invention as claimed: Claims 1-5, 8-10, 13, 15-16, 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 2002/016967 by Mann et al.

Regarding claim 1, a network management system (Mann: page 1, para 9) comprising:

- a plurality of communications apparatuses for performing communications through a network (Mann: page 2, para 21; page 3, para 25; requests to and from clients);

- an equipment management apparatus (Mann: page 2, para 21; NOC), connected to at least one of the plurality of communications apparatuses through the network (Mann: page 2, para 21), for monitoring and controlling the at least one of the plurality of communications apparatuses (Mann: page 2, para 21; monitors and manages); and

- a directory apparatus for managing connection relations between the plurality of communications apparatuses and the equipment management apparatus (Mann: page 3, para 25; information broker),

- wherein the equipment management apparatus includes a directory client for transmitting an obtaining request for obtaining a connection relation and receiving the connection relation corresponding to the obtaining request (Mann: page 2, para 21; NCC is an application running on the host and is in communication with the database), and

- the directory apparatus includes a directory information base for storing the connection relations and a directory server for receiving the obtaining request from the directory client (Mann: page 3, para 22; database), searching the directory information base in order to detect the connection relation corresponding to the obtaining request (Mann: page 3, para 22, 25; quering), and transmitting the connection relation having been detected to the directory client (Mann: page 3, para 22, 25; to and from clients).

Regarding claim 2, the network management system of claim 1 further comprising:

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a network management apparatus for managing the plurality of communications apparatuses and the equipment management apparatus and transmitting the obtaining request (Mann: col. 2, para 21; NOC),

wherein the directory client receives the obtaining request from the network management apparatus (Mann: page 2, para 21; from administrator), transmits the obtaining request to the directory server (Mann: page 3, para 21), receives the connection relation corresponding to the obtaining request from the directory server (Mann: page 2-3, para 21-22), and transmits the connection relation having been received to the network management apparatus (Mann: page 2, para 21; NCC).

Regarding claim 10, the network management system of claim 2,

wherein the directory apparatus further includes an identification information base for storing identification information for identifying the network management apparatus (Mann: page 3, para 25; page 4, para 37; database stores information about subscriptions; heartbeat messages contain GUIDs which are subscribed through the database),

the directory server detects the identification information corresponding to the network management apparatus from the identification information base (Mann: page 3, para 25; para 37), and

the directory client receives the obtaining request from the network management apparatus (Mann: page 2, para 21), transmits a request for obtaining the identification information corresponding to the network management apparatus to the directory server (Mann: page 3, para 21-22), receives the identification information from the directory server, and identifies the network management apparatus based on the identification information having been received (Mann: page 4, para 37; subscribed to).

Regarding claim 4, the network management system of claim 1, wherein the directory apparatus includes an input unit for receiving an input relating to the connection relation (Mann: page 3, para 25; information broker capable of storing subscription information), and the directory server inputs the connection relation received through the input unit and stores the connection relation in the directory information base (Mann: page 3, para 25).

Regarding claim 8, the network management system of claim 4,

wherein the equipment management apparatus further includes a communications path control unit for inputting the connection relation received by the directory client and transmitting a request for establishing communications based on an input connection relation, to at least one of the plurality of communications apparatuses (Mann: page 2, para 21; input from admin to NCC; EMA is the NOC), and

each of the plurality of communications apparatuses further includes a communications agent for receiving the request for establishing communications from the communications path control unit (Mann: page 2, para 21; NCC), and establishing the communications with the equipment management apparatus based on a received request (Mann: page 3, para 21, 22, 25).

Regarding claim 9, the network management system of claim 4,

wherein the directory information base further stores identification information (Mann: page 3, para 25; GUID), to be corresponding to each of the plurality of communications apparatuses, for identifying the each of the plurality of communications apparatuses (Mann: page 4, para 37; page 3, para 26),

the directory server detects identification information corresponding to at least one of the plurality of communications apparatuses optionally selected, in the directory information base (Mann: page 3, para 22, 25; page 4, para 37), and

the equipment management apparatus further includes an identification control unit for transmitting a request for obtaining the identification information corresponding to the at least one of the plurality of communications apparatuses optionally selected to the directory server (Mann: page 2, para 21; NCC), receiving the identification information from the directory server, and identifying the at least one of the plurality of communications apparatuses optionally selected based on a received identification information (Mann: page 3, para 25; page 4, para 37).

Regarding claim 5, the network management system of claim 1,

wherein the equipment management apparatus further comprises a relation register unit for inquiring a connection relation between the equipment management apparatus and the plurality of communications apparatuses

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(Mann: page 2, para 21), and transmitting an inquired connection relation to the directory server (Mann: page 3, para 21), and

the directory server receives the inquired connection relation from the relation register unit and stores a received connection relation in the directory information base (Mann: page 3, para 25, 22).

Regarding claim 3, the network management system of claim 1,

wherein the equipment management apparatus includes a plurality of equipment management apparatuses (Mann: page 2, para 21; NOCs; subscribing entities page 4, para 37),

the directory information base stores connection relations between the plurality of equipment management apparatuses and the plurality of communications apparatuses (Mann: page 3, para 22, 25 between components and services being managed), and

the directory client included in one of the plurality of equipment management apparatuses transmits the obtaining request, to the directory server (Mann: page 2, para 21; NCC), for obtaining a connection relation between another of the plurality of equipment management apparatuses and at least one of the plurality of communications apparatuses connected to the another of the plurality of equipment management apparatuses, and receives the connection relation corresponding to the obtaining request from the directory server (Mann: page 3, para 21, 22, 25).

Regarding claim 13, the network management system of claim 3, wherein the directory apparatus includes an input unit for receiving an input relating to the connection relation (Mann: page 3, para 25; page 4, para 37; receives and stores information), and the directory server inputs the connection relation received through the input unit and stores the connection relation in the directory information base (Mann: page 3, para 25; page 4, para 37; receives and stores information).

Regarding claim 15, the network management system of claim 13,

wherein each of the plurality of equipment management apparatuses further includes a communications path control unit (Mann: page 2, para 21; NCC) for inputting the connection relation received by the directory client and transmitting a request for establishing communications based on an input connection relation, to at least one of the plurality of communications apparatuses (Mann: page 2, para 21; input from admin to NCC; EMA is the NOC), and

each of the plurality of communications apparatuses further includes a communications agent for receiving the request for establishing communications from the communications path control unit (Mann: page 2, para 21; NCC), and establishing the communications with one of the plurality of equipment management apparatuses based on a received request (Mann: page 3, para 21, 22, 25).

Regarding claim 16, the network management system of claim 3,

wherein each of the plurality of equipment management apparatuses further comprises a relation register unit (Mann: page 2, para 21; NCC) for inquiring a connection relation between the plurality of equipment management apparatuses and the plurality of communications apparatuses (Mann: page 2, para 21), and transmitting an inquired connection relation to the directory server (Mann: page 3, para 21), and

the directory server receives the inquired connection relation from the relation register unit and stores a received connection relation in the directory information base (Mann: page 3, para 25, 22).

Regarding claim 18, a directory apparatus comprising:

a directory information base for storing connection relations defining communications paths between a plurality of communications apparatuses and a plurality of equipment management apparatuses which monitor and control the plurality of communications apparatuses (Mann: page 3, para 22, 25); and

a directory server for receiving an obtaining request for obtaining a connection relation (Mann: page 3, para 25; receives information and queries), searching the directory information base in order to detect the connection relation corresponding to a received obtaining request, and transmitting a detected connection relation (Mann: page 3, para 22, 25).

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Regarding claim 19, the directory apparatus of claim 18 further comprising an input unit for inputting the connection relation (Mann: page 3, para 25; page 4, para 37; receives and stores information), wherein the directory server inputs the connection relation received through the input unit and stores the connection relation in the directory information base (Mann: page 3, para 22, 25; receives and stores information).

Regarding claim 20, a network management method of a network system composed of a plurality of communications apparatuses (Mann: page 2, para 21; page 3, para 26), and a plurality of equipment management apparatuses (Mann: page 2, para 21; page 4, para 37), connected to the plurality of communications apparatuses through a network (Mann: page 2, para 21; Fig. 1), for monitoring and controlling the plurality of communications apparatuses (Mann: page 2, para 21), the network management method comprising:

- storing connection relations for defining communications paths connecting the plurality of communications apparatuses and the plurality of equipment management apparatuses in a directory information base (Mann: page 3, para 22, 25);

- receiving an obtaining request for obtaining a connection relation (Mann: page 2, para 21; page 3, para 22, 25);

- detecting a connection relation corresponding to a received obtaining request by way of searching the connection relations stored (Mann: page 3, para 21, 22, 25); and

- transmitting a detected connection relation (Mann: page 3, para 21-22, 25).

Claims 6-7, 11-12, 14, 17 are rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Publication No. 2002/016967 by Mann et al in view of U.S. Patent No. 6,279,001 by DeBettencourt et al.

Regarding claim 11,

The Mann reference teaches the network management system of claim 3, wherein each of the plurality of equipment management apparatuses includes monitors each of the plurality of equipment management apparatuses (DeBettencourt: col. 6, lines 51-59),

The Mann reference does not explicitly state monitoring load state.

The DeBettencourt reference teaches a load monitor unit for monitoring a load state of the each of the plurality of equipment management apparatuses (DeBettencourt: col. 6, lines 51-59), and

a load control unit for collecting load states from the load monitor unit included in the each of the plurality of equipment management apparatuses (DeBettencourt: col. 6, lines 51-59) and managing the plurality of communications apparatuses connected to the plurality of equipment management apparatuses, based on the load states having been collected (DeBettencourt: col. 6, lines 51-59).

The DeBettencourt reference further teaches the system the load monitors can give current information about the system operation, predict and adapt to impending crises (DeBettencourt: col. 3, lines 50-62).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the network management system as taught by Mann while employing a load monitor as taught by DeBettencourt in order to allow the load monitors can give current information about the system operation, predict and adapt to impending crises (DeBettencourt: col. 3, lines 50-62).

Claims 6-7, 12, 14, 17 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of DeBettncourt et al and Mann et al.

Regarding claim 12, the network management system of claim 11,

wherein each of the plurality of equipment management apparatuses further includes a warning generation unit for generating a warning when the load state monitored by the load monitor unit is over a predefined threshold (DeBettencourt: col. 3, lines 51-53).

Regarding claim 17, the network management system of claim 1,

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wherein the equipment management apparatus includes a load monitor unit for monitoring a load state of the equipment management apparatus (DeBettencourt: col. 6, lines 51-59), and the directory apparatus further includes a load control unit for obtaining the load state from the load monitor unit included in the equipment management apparatus (DeBettencourt: col. 6, lines 51-59) and managing the plurality of communications apparatuses connected to the equipment management apparatus, based on an obtained load state (DeBettencourt: col. 6, lines 51-59).

Regarding claim 6, the network management system of claim 4, wherein the directory apparatus further includes a communications apparatus information table (Mann: page 3, para 22, 25; database or information broker) for storing a maximum number of the plurality of communications apparatuses which can be connected with the equipment management apparatus (DeBettencourt: col. 7, lines 61-65; col. 8, lines 38-42; number of concurrent threads handling requests; limit load per request; Fig. 12A) and

a number of the plurality of communications apparatuses which are currently connected with the equipment management apparatus (DeBettencourt: col. 8, lines 3-5), and

a number control unit for defining the plurality of communications apparatuses to be connected with the equipment management apparatus (DeBettencourt: col. 7, lines 61-65; col. 8, lines 38-42; number of concurrent threads), based on the maximum number of the plurality of communications apparatuses which can be connected with the equipment management apparatus and the number of the plurality of communications apparatuses which are currently connected with the equipment management apparatus stored in the communications apparatus information table (DeBettencourt: col. 8, lines 27-43).

Regarding claim 7, the network management system of claim 6,

wherein the directory information base further stores locations of the plurality of communications apparatuses (Mann: page 4, para 37; subscriber entities; page 3, para 25), and

the directory apparatus further includes an area control unit for defining the plurality of communications apparatuses to be connected with the equipment management apparatus (DeBettencourt: col. 7, lines 61-65; col. 8, lines 38-42; number of concurrent threads), based on the maximum number of the plurality of communications apparatuses which can be connected with the equipment management apparatus and the number of the plurality of communications apparatuses which are currently connected with the equipment management apparatus stored in the communications apparatus information table (DeBettencourt: col. 8, lines 3-5), and the locations stored in the directory information base (DeBettencourt: col. 6, lines 15-23).

Regarding claim 14, the network management system of claim 13, wherein the directory apparatus further includes a communications apparatus information table (Mann: page 3, para 22, 25; database or information broker) for storing a maximum number of the plurality of communications apparatuses which can be connected with one of the plurality of equipment management apparatuses and a number of the plurality of communications apparatuses which are currently connected with the one of the plurality of equipment management apparatuses (DeBettencourt: col. 7, lines 61-65; col. 8, lines 38-42; number of concurrent threads handling requests; limit load per request; Fig. 12A), and

a number control unit for defining the plurality of communications apparatuses to be connected with the one of the plurality of equipment management apparatuses (DeBettencourt: col. 7, lines 61-65; col. 8, lines 38-42; number of concurrent threads handling requests; limit load per request; Fig. 12A), based on the maximum number of the plurality of communications apparatuses which can be connected with the one of the plurality of equipment management apparatuses and the number of the plurality of communications apparatuses which are currently connected with the one of the plurality of equipment management apparatuses (DeBettencourt: col. 8, lines 3-5) stored in the communications apparatus information table (DeBettencourt: col. 8, lines 27-43).

REMARKS

Applicant has argued the 102(e) reference with regards to the independent claims and has made an amendment to claim 20.

The Applicant Argues:

With regards to claims 1, 18 and 20, the Mann reference does not teach a NOC including a directory client, which is used to send and obtain requests from the directory apparatus in order to obtain a connection relationship. And the Broker is used to mediate requests to and from clients, not the NOC itself in contrast to the claim language.

In response, the examiner respectfully submits:

With respect to claims 1 and 2; the Mann reference does teach the claimed limitations. The equipment management apparatus is the Network Operating Center (NOC). Attached to the NOC is the Network Control Console (NCC) which servers as the communication interface between the data network management system and a system administrator. The NCC is the directory client. The directory client is an administrator that subscribes to the managed information. The NCC obtains the information about the connection status and services being used (page 5, para 40). The NCC sends and obtains the connection relationships of the nodes on the network.

The broker mediates the requests and information to and from clients along the bus. The broker can be a part of the NOC as described on page 3, para 25. The information broker stores and publishes subscription information. The broker manages the information passed along the bus. This information can be exchanged between the NCC and the nodes (page 4, para 33). "The subscribing entities are generally the NCCs" (page 4, para 37).

With respect to claim 18, the directory server is the NOC that receives an obtaining request from the NCC to obtain connection relation of the devices and nodes of the network. The broker is the entity, which manages the subscription information across the bus. The subscription information is the connection information of the devices (page 4, para 37). The NOC notifies the NCC when failure occurs and signals cease (page 5, para 38-39).

With respect to claim 20, the Mann reference teaches storing connection relations defining the communications between apparatuses (page 3, para 22, 25). The broker is used to mediate the communication on the bus and publish and store the subscription data that is used by

the NOC and the nodes (page 3, para 25). The broker stores the data and the NOC stores the data as well in its database (page 3, para 25; 22).

Applicant is encouraged to further define the connection relations in greater detail as well as all other aspects of the instant applications features to overcome the prior art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart
Examiner
Art Unit 2155

brb




BHARAT BAROT
PRIMARY EXAMINER